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The synergistic implications of COVID-19, public health and environmental ethics in Kenya

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COVID-19 is a global pandemic that has unmasked the underlying and once-ignored challenges in public health, especially in Africa. The pandemic has adversely disrupted people's lives where systemic and structural inequalities have taken root owing to the interaction among religious, political, economic, socio-cultural, environmental and other influential factors, resulting in adverse outcomes. These interactions affected not only the psychological, physical, emotional and social wellbeing of all humanity but also their ethical way of thinking. Adherence to the local government ministry of health's stringent measures, such as voluntary self-quarantine or forced quarantine, may be unattainable. This raises several ethical issues that are not new but which become intensified in pressing situations. Ethically, legitimate public health measures and conservative environmental efforts are easier to voluntarily comply with than being enforced. In this article, a phenomenological methodology was employed to not only debunk the ethical difficulties in adhering to the pandemic's preventive protocols, but also to reason on the entwinement between the public health and environmental concerns. The article foregrounded that the COVID-19 pandemic is both a healthcare crisis and an environmental ethics challenge. In focussing on how systemic and structural inequalities influence social life, the article argued that public health ethics informs environmental conservation towards a more holistic approach to health and wealth that flows from environmental health ethics.

Contribution: The article advanced ongoing discussions on environmental health ethics. Environmental health ethics is a transdisciplinary and integrated approach that upholds sustainable balance and optimisation of the health of people, animals and ecosystems. A sensitisation and realisation of our inter-webbed relatedness to all, is a major step towards sustainable health and wealth.

Keywords: COVID-19; environmental ethics; gender equity; holistic approach; public health ethics; synergistic; structural inequalities.

Introduction

The COVID-19 pandemic has exposed the underlying challenges in public health and environment conservation efforts, especially in Kenya. A group of viruses that are zoonotic, means that they are transmitted and infect both animals and humans (World Health Organization [WHO] 2022a). Human viruses can cause mild diseases similar to a common cold, while others cause more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (WHO 2022b). In December 2019, new pneumonia cases of an unknown strain of virus were identified in a city in Wuhan, China. After investigations, a novel virus that had not infected humans before was identified as the cause. The new virus was thus named COVID-19 virus (WHO 2020b). The high transmission rate of the virus, which saw it ravage several countries within a very short time, prompted the WHO to declare it a public health issue of international concern and a pandemic on 11 March 2020 (WHO 2020a). By then, the transmission and mortality rates were surging rapidly across the globe. Each nation in the globe took up the responsibility of protecting its citizens and prompted heightened surveillance of the virus in all the nation's entry points. In addition, other measures such as quarantine and self-isolation, social and physical distancing, washing hands with soap and running water, wearing masks and closure of academic institutions and religious places of worship, working from home, among others, were put in place to curb the spread of the virus. The COVID-19 is not the only zoonotic virus to be ever witnessed. In March 2014, the Ebola virus ravaged most countries in West Africa, with WHO declaring it a pandemic in June 2016 (WHO 2016). H1N1 influenza virus is another zoonotic virus also known as Swine flu, which was first isolated from pigs by researchers, pork producers and veterinarians in the 1930s (Jilani et al. 2021). Other zoonotic viruses witnessed in human history include Zika,

avian flu, West Nile, Lyme disease and yellow fever. These outbreaks of zoonotic interspecies transmission leading to pathogenesis in humans attest to the webbed interrelationships that exist between animals and humanity (Musili 2021). The COVID-19 pandemic has changed the global community's view of the link between the environment and human health. It heightened the recognition of the interdependencies between animals, people, plants and their shared environment, which has necessitated a call for 'One Health'. According to Shrestha, Acharya and Shrestha (2018:8), 'One Health is an emerging global key concept integrating human and animal health through international research and policy'. This article appreciates the inter relational web between people, animals, plants and the environment. The main focus is on the synergies and implications that COVID-19 prevention and management have stimulated between public health ethics and environmental ethics.

There is a consensus that the pandemic has adversely disrupted people's lives where systemic and structural inequalities have taken root owing to the interaction among religious, political, economic, socio-cultural, environmental and other influential factors, resulting in adverse outcomes. These interactions affect not only the psychological, physical, emotional and social wellbeing of all humanity but also their ethical way of thinking. Adherence to the local government ministry of health's stringent measures, such as staying at home, lockdowns, voluntary self-quarantine or forced quarantine, mandatory vaccination, wearing of masks and washing hands with running water and soap, may have been unattainable to all. This raises a number of ethical issues that are not new but which become intensified in pressing situations. A good example is a way in which some people object to 'infringements on their freedom' when they are given 'rules' or 'restrictions' limiting what is allowed and even punishing those who violate the rules. Ethically legitimate public health measures are easier to voluntarily comply with than being enforced as they protect one's life and that of his or her relations. With the cognisance of our surroundings, we may very well need to question what ethical thinking we are using to conserve the environment in such situations.

An environmental condition such as climate change impacts social and environmental determinants of good health. Climate change causes death and illness from increasingly frequent extreme weather conditions such as droughts and floods that disrupt food systems, increased zoonosis, food, water, vector-borne diseases and mental health problems. Researchers now seem to agree that the cause of the next pandemic could be climate change, with an argument that the rising temperatures and melting glaciers will lead to the forcible relocation of wild animals to populated areas leading to a viral jump in humans (Carlson et al. 2022). These climate-sensitive health risks are disproportionately felt by the most vulnerable and marginalised groups in society, namely women, children, poor communities, older populations, people living with disabilities, and those with underlying health conditions. Systemic and structural inequalities in a normal setting influence social life. These inequalities, in turn, challenge the same societies and governments during a cooperative occurrence like the COVID-19 pandemic, more so on its management. How do these inequalities deter adherence to public health ethics? And how does this deterrence, in turn, curtail advances in environmental ethics?

The article explores an intriguing entwinement between the public health and environmental ethical concerns in the face of the COVID-19 pandemic. The article employed a phenomenological approach that utilises individuals' experiences and perceptions through inductive interpretation to challenge and highlight structural and normative assumptions (Lester 1999). The article is structured into three main parts. Part 1 outlines the systemic and structural inequalities magnified by COVID-19 in Kenya. Part 2 describes the interplay between COVID-19 and public health ethics, taking on the key role that the government plays both in the guidance and implementation of health guidelines. In Part 3, I explore how public health ethics informs environmental ethics by focusing on the systemic inequalities exposed by the COVID-19 pandemic and how they impact both public health and environmental ethics. The article reflects on embracing environmental health ethics that reckon with both the health of humanity and the environment.

Systemic and structural inequalities magnified by COVID-19 in Kenya

The first COVID-19 case in Kenya was reported and recorded on 12 March 2020 (Ministry of Health 2020a). Three days later, on 15 March 2020, the cases rose to three, prompting the then President of Kenya, Uhuru Muigai Kenyatta to close all learning institutions and places of worship as well as issuing directives to work from home for both public and private sectors (Ministry of Health 2020b). As the cases increased, strict measures to prevent the further spread of the virus, such as curfews, lockdowns and social distancing, among others, were put in place. The living standards of people, as well as the economy, were deeply affected, thus influencing their social life. In this section, the author highlights the systemic and structural inequalities magnified by the COVID-19 pandemic in most Kenyan societies. Systemic and structural inequalities are deeply embedded into the fabric of society. They are usually generational and culturally learned, and permeate community-governing organisations. The systematised inequalities are structured and maintained through an imbalance in power distribution across societal institutions, including but not limited to culture, religion, education, governance, business economy, legal courts and health care systems, among others.

The people, who have been sidelined by the existing systems in Kenya, have been hit hard by the pandemic. In agreement with Lizzie Wade's (2020:700) sentiments, 'the people at greatest risk are often those already marginalized'. These

include the poor, people living with disabilities, women, young girls and minorities who face discrimination in ways that damage their health or limit their access to medical care even before the pandemic. She further argues that pandemics follow society's fault lines by exposing and magnifying power inequities that shape the population's health even in normal times (Wade 2020). In turn, the COVID-19 pandemic affected existing societal inequalities by either exposing or reinforcing unfair power structures, as discussed below.

A widened gap between the rich and the poor in the society is an injustice that the pandemic highlighted in several ways. Kenyans residing in informal settlements who were already living in poverty found themselves hit hard by the measures implemented by the government to curtail the spread of the COVID-19. This category of people live a 'hand to mouth' lifestyle (low net worth households) where the meagre income they earn is purely for basic needs, that is, food, shelter, clothing, education and health care. Restrictions of movements, lockdowns, forced closure of markets and national curfews meant that they could no longer fend for their families. Furthermore, the mandatory public physical and social distancing expectations in public transport vehicles resulted in rising public transport costs, making it even more challenging to move around looking for work. Women who survived on washing clothes for their neighbours in the cities were no longer able to earn their living, as their potential employers worked from home. Most middle-class people who worked in hotels and industries lost their jobs, causing unimaginable disruptions to the already strained economy. As the pandemic ravaged the country, it became difficult to afford necessities (water, soap, rent, food, face masks) needed to protect themselves from the virus. Results from a study conducted by Kenya Red Cross Society and Concern Worldwide in May 2020 on food security in Mukuru and Korogocho informal settlements in Nairobi revealed that:

> … on average, families in both informal settlements could only afford less than 25% of the food they needed. About a quarter of the informal settlement residents were likely to be experiencing severe hunger in their households, and less than 8% of households had a stable income earner. The assessment also showed that Nairobi faces an acute child malnutrition crisis, with over 40 000 children in informal settlements already acutely malnourished. This undernourishment could lead to long-term negative developmental and cognitive effects in the children and significantly impact their future abilities to cope with and mitigate the poverty they were born into. (2020:5)

Poverty leads to a lack of necessities that in turn affects the health and wellbeing of all humanity. A malnourished population living in dire conditions paints a gloomy picture for a nation. Socio-economic instability results in situations of lack, where robbery and murder become the norm, thus destabilising peaceful co-existence.

The COVID-19 pandemic occurred against a backdrop of socioeconomic inequalities, with its prevention and management aggravating already existing misfortunes. Social determinants of health include 'the conditions in which people live, work, grow, and age, including working conditions, unemployment, access to essential goods and services (e.g. water, sanitation, and food), housing, and access to healthcare' (WHO 2008) and availability of technology. In situations of dire societal determinants of health and its subsequent inequalities, the severity of COVID-19 loomed. High mortality rates and COVID-19 infections within informal settlements threatened health and wellbeing. These intersecting components of minority groups, people living in informal areas characterised by higher socio-economic deprivation, those in poverty, and other marginalised groups such as people living with disabilities, women, girls and young children have seen the COVID-19 pandemic being classified as syndemic (Singer 2000). Merril Singer (2000) developed the concept of syndemic to imply 'closely intertwined and mutual enhancing health problems that considerably affect the overall wellbeing of people within the context of a perpetuating structure of harmful social conditions' (Singer 2000:13). Relationships between COVID-19 prevention, management and access to its treatment among the populace in informal settings bring about intersecting components arising from systemic structural inequalities.

Within informal settlements in Nairobi, the pre-existing epidemics of chronic diseases magnified the prevalence and severity of the COVID-19 pandemic, which are themselves socially patterned and associated with the named social determinants of health. Diseases, such as human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS), diabetes, hypertension, asthma, cancer and renal diseases, among others, ravaged the lives of people living in more socio-economically disadvantaged spaces. These painful conditions not only erode people's economic stability but are also breeding environments for psychological and mental instability characterised by stress and anxiety. In such situations, gendered unpaid labour results as women take the caring role for both the sick and the rest of the family members. Psychological distress because of care duties and confinement in poor housing with no sustenance often results in gender-based violence (GBV). During the pandemic, house leadership returned to traditional forms of life, where male dominance, along with the naturalisation of sexual and gender differences, took prominence. Men felt in charge, though the prevailing socio-economic conditions deterred them from being the breadwinners and commanding heads. The watered-down supremacist tendencies because of the inability to provide resulted in ill mental health that led to violence. In Kenya, GBV was reported to quintuple, especially among women and young girls (Decker et al. 2022; John et al. 2021; Ngunjiri et al. 2020). Crucially, the axes of oppression intersected within the oppressor, bringing together the affirmation of gender inequalities even within homes. Patriarchal systems and chauvinistic tendencies of power over women that exhibited control or domination over their bodies ensued from these enclosed spaces. Homes that were perceived as havens became torture chambers for women and children despite their unpaid care work.

The social health determinants continue to prompt social justice, especially regarding access to quality healthcare services. Scholars agree that there is lower access to health care in marginalised communities (Barasa, Ouma & Okiro 2020; Embleton et al. 2021; Kabia et al. 2019; Macharia et al. 2021; Oluoch-Aridi et al. 2020), even as the country rallies for a universal health care system. The COVID-19 pandemic aggravated the situation, as the financial stability of these disadvantaged groups was crippled. Overpopulation in the informal settlements, impassable pathways, and poor sanitation made these people more prone to COVID-19 infections. Studies continue to show a shred of increasing evidence that 'living in marginalising environments may produce feelings of powerlessness and collective threat among residents, leading to chronic stressors that, in time, damage health' (Whitehead et al. 2016:55). Research by African women theologians on HIV and AIDS in Africa attests to the observation that communities and persons mostly impacted by new epidemics most often are surviving other threats to their health, which may not necessarily be biological (Nadar & Phiri 2012). Gender inequality, and cultural and religious beliefs were other structural threats that fuelled HIV transmission and infections among women. Just like HIV, COVID-19 has been branded a gendered pandemic, as more men were infected than women (Bwire 2020). Bwire (2020:876) argues that 'women are more resistant to infections owing to biological differences in the immune systems between men and women'. He further alludes that, 'men's carefree lifestyle characterized by smoking; drinking and inability to stay at home exposed them more to COVID-19 compared to women who are more obedient to preventive measures'.

Working from home unearthed a standing digital divide among the population. The education sector was hard hit, as some communities lacked electricity and smart gadgets for virtual learning and engagements (Makira & Owino 2021). A mention of the widening digital gap in Kenya goes back to politics, where previously school-going children were promised smart gadgets to facilitate their technological literacy. To date, it remains an unfulfilled promise and a campaigning tool. Installation of electricity in the country is commendable; though a great chunk of land remains uncovered. Political advances within the country have been marred with lies, disobedience and corruption, even during the pandemic. For instance, the World Bank donated Kshs 1 billion to cushion Kenya against the rampage caused by COVID-19. However, Maema (2020) and Kapchanga (2020), who cited a leaked memo on the breakdown of Ksh1.3 billion spent in the fight against the COVID-19 pandemic, showed that Ksh42 million had been spent on leasing ambulances, Ksh4 million on tea and snacks, and Ksh2 million on airtime instead of utilising it for the procurement of personal protective equipment, medicines, and setting up of isolation facilities. As the Kenyan ministry of health imposed lockdowns, physical and social distancing, Kenyan politicians flouted the directives and engaged in campaign trails aggravating the situation even further.

The closure of religious institutions further exacerbated people's psychological stability. Kenya is a religious country, and most of its citizens ascribe to a form of religion. The COVID-19 outbreak and the subsequent closure of places of worship prompted a prophetic and spiritualised response on the pandemic, to the point of being referred to as a 'demon' that needed to be cast away from the people (Fosu-Ankrah & Amoako-Gyampah 2021). Most Pentecostal and charismatic pastors and ministers perceived the virus as more of a spiritual issue than a scientific medical phenomenon. They convoked the blood of Jesus over themselves and their adherents. The belief of being covered, protected and hence immune to contracting the disease spread at first, forcing the government to enforce strict closure and manning of some places of worship (Kilonzo & Omwalo 2021). Some charismatic churches, however, closed indefinitely, highlighting the business-oriented model of some mushrooming churches in the cities. Furthermore, the Pentecostal faith and healing prophetic ministries were put on the spot as members grappled with a pandemic that their ministers could not command 'out'. Christians' perceptions of the COVID-19 are well captured by Kilonzo and Omwalo (2021) with their assertions that:

> … To them, faith healing and the Church as the ultimate place of refuge from a restless sick world, is a major plank upon which the Church is established. The ban was therefore interpreted to be a total subversion of the place of the church in the contemporary world. In a few places the ban and the ensuing global condition occasioned by the pandemic was seen as the onset of the apocalypse forewarned in the book of Revelation that would be preceded by the mark of the beast. Corona was, in this perspective, the forerunner of the mark of the beast. Others instigated the Church to take on the government on its directives by indicating that, the Bible prohibits Christians from conforming to the world but instead should transform the world. (p. 4)

A few weeks into the pandemic, the loss of several church ministers prompted a change in their beliefs and perception of the pandemic. The virus spared no one, religious and non-religious alike. As a result, religious leaders embraced the government's closure of places of worship and urged their members to adhere to preventive measures. They, as a result, turned to virtual spaces to reach their flock, both for ministration and accompaniment purposes. In addition, healing miracles and prophecies ministries were greatly affected, unearthing the need for sound theological training for pastors.

In this article, I therefore resonate with Mukumbang (2020), who notes that COVID-19 exposed systemic and structural social inequalities ranging from social marginalisation to exclusion. The inequalities manifested through unequal access to resources, limited political, social and economic participation and voice, and being denied access to opportunities. COVID-19 as an infectious pandemic enforced, rejuvenated and amplified pre-existing structural inequalities that continue to ravage society and its surroundings. The vulnerability of both people and nature with regard to their wellbeing has become more conspicuous and exacerbated

with the advent of the COVID-19 pandemic. Preventive and conservative measures of both the pandemic and the environment call on human morally calculated action, hence the need to question what kind of ethical thinking we are using in our effort to conserve the environment and prevent the further spread of COVID-19. Ethically, legitimate public health measures are expected to be easier to comply voluntarily with than being enforced. Public health ethics calls on the responsibility of each and every person to take care of his or her relations, more so in unfortunate communal disruptions.

In the upcoming section, I debunk the ethical difficulties in adhering to the pandemic's preventive protocols while highlighting the trends public health ethics is grappling with because of COVID-19.

COVID-19 and public health ethics

Public health ethics deals with a systematised evaluation of moral challenges in public health, preventive measures and/or medicine. For example, the outbreak of COVID-19, which proved to be infectious through saliva (Fini 2020), caused serious respiratory complications to the populace. This meant that the government had to take responsibility for averting the further spread of the virus. Public health ethics as a field of practice then becomes the responsibility of the government, the key health stakeholders, and the entirety of the populace to contain infectious diseases such as the COVID-19. Principles and values governing the care for each other became paramount. As such, frameworks for moral decision-making and justifications for any act undertaken in such dire situations ought to revolve around health promotion and infectious disease control. Individual rights, liberties and values came into close conflict with public health goals as the government worked towards containing the COVID-19. As much as the Kenyan government stakeholders were working towards containing the virus, most of the populace expressed dissatisfaction with how their rights and freedoms were trampled upon.

While in a situation like the one COVID-19 prompted, due diligence is a virtue that needed to be exercised, as all citizens felt the weight of the pandemic. This was, however, not the case, as argued below. In the effort to contain the spread of the COVID-19, the Kenyan government issued curfews and lockdowns, and closed all institutions apart from those offering essential services. People were forced to stay and work from home without crisscrossing other counties or rural areas. Most people felt that their right to freedom of movement was infringed upon.

A good example is how some people object to 'infringements on their freedom' when they are given 'rules' or 'restrictions' limiting what is allowed and even punishing those who violate the rules. Many politicians and potential politicians of all calibres went about drawing masses to sell their manifestos at a time when they were supposed to observe and adhere to the lockdown call. The disobedience in the upper-class people prompted the low-middle-class people to feel that their right to movement and expression was being trampled upon, as it never applied to all equally. For instance, disobedience to the curfew time accrued several strokes from the police, with some even losing their lives at the hands of police officers (Mutahi & Wanjiru 2020).

COVID-19 threw countries into a panic mode, as most developing countries are ill-prepared for health systems management of infectious pandemics (Chowdhury & Jomo 2020). These scenarios of panic have recurred in the face of new viruses such as H1NI, Ebola virus, Hantavirus, West Nile virus, SARS and HIV, among others (Bhadoria, Gupta & Agarwal 2021). Nations' preparedness in terms of their health systems is crucial in determining their people's adherence to containment measures. The lack of strong and working medical supplies and systems not only brings panic among citizens but also disobedience to the morally reasoned action towards containment. Philanthropist Jack Ma Yun supported the Kenyan government with kits for testing COVID-19 and an estimated amount of $ 400 million in funds. However, 2 months later, the testing kits and the amounts were reported missing to a group that was later named COVID-19 millionaires (Mahomed, Loots & Andrews 2020). Two years later, the mega corruption of COVID-19 millionaires is yet to be brought to face justice. Such corrupt means of misappropriating funds that were meant to help people by the very government that has the sole responsibility of protecting its citizens challenged obedience to the COVID-19 protective measures. Public health ethics within particular governments are governed by identifying and clarifying the ethical dilemma posed, analysing it in terms of alternative courses of action and their consequences and resolving dilemmas. The main goal is usually to ascertain the best course of action that incorporates and balances the guiding principles and values. However, the measures put in place were contravened as the government and her stakeholders never served the best models worth emulating.

As COVID-19 cases surged in the country, the low- and middle-class citizens felt its blunt edges. Sexual GBV became the order of the day, as men, women, boys and girls strained to survive confined in single-roomed informal houses. The situation of lack, coupled with the inability and incapability to provide for the family, among other constraints, destabilised people's mental health. Cases of women giving birth in houses and along the roads increased as the pandemic compromised access to reproductive health services. School children, primary and secondary, and university students were introduced to virtual learning. This strained most families further and unearthed technological inequalities within the country. Tracking of COVID-19 through mobile phones contravened citizens' right to autonomy and privacy as their movements remained tracked through the days. Poor electricity distribution within the country stood out, challenging infrastructural and development planning stakeholders. Many people living with HIV and AIDS missed their medication as COVID-19 ravaged the country. Hastened burials, with minimal attendance of family members, remain

a major cause of psychological and emotional hiccups. Kenyans have elaborate burial rituals that usher the dead to the ancestral world peacefully. The peace of the family and entire tribe is premised on how well they bury the dead, who are believed to have powers to destabilise peace once handled indecently. Stress and stigma for both the bereaved families and COVID-19 survivors loomed for longer, especially if their loved ones succumbed to COVID-19. These, among other challenges, shaped how people reacted to the government and the ministry of health guidelines in curbing the spread of COVID-19.

Health is a human right anchored in values as a basic necessity of life. It promotes the wellbeing of persons, communities, as well as economic prosperity and national development. However, public health decisions for the pandemic control measures were made under difficult circumstances driven by urgency and panic, with uncertainties and complexities for public goods over individual rights (Aliyu 2021). Besides, it is important to understand that public health ethics goes beyond partial considerations to embrace impartial values of social justice and public trust towards the governing bodies. However, governments and ministries of health embraced the utilitarian framework of moral reasoning to control the pandemic among the populace. Utilitarianism, according to Savulescu, Persson and Wilkison (2020:620), 'is an influential moral theory that states that the right action is the action that is expected to produce the greatest good'. One, however, wonders whether the intended outcome was achieved in terms of the moral reasoning of the entire population.

Even as we learn to live with COVID-19, widening inequities are being witnessed. The principles of ethical decision-making are premised on an act to be taken, life situation or circumstance and guiding motivation or intention compromised equality for all. Partiality prevailed, in most instances, over impartial principles of ethical decision-making, including but not limited to the duty to care, non-discrimination, equity, liberty, privacy, proportionality, public protection from harm, solidarity, reciprocity and public trust, among others. Using the utilitarian theory, the governments imposed curfews and lockdowns on people to contain the virus, which was a good thing. However, the violence that emanated from the homes and the looting that ensued in government offices surpassed the expected good. For instance, in Kenya, the COVID-19 millionaires misappropriated public funds for personal benefit without considering society's wellbeing. The campaigning politicians further organised rallies when the precaution of social distancing was still in place. Misuse of power and corruption are examples of instances where the populace loses trust in a government. According to Aliyu (2020), values of honesty, trust, human dignity, solidarity, reciprocity, accountability, transparency and justice are major considerations in public health ethics if ethical decisions that consider all ought to be made.

Dishonest dealings pertaining to COVID-19 containment and management have had a huge impact, even in the reception of vaccination. Misinformation and mistrust engulfed the populace regarding the efficacy, swift production and administration of the vaccines (Guljaš et al. 2021; Sibanda, Muyambo & Chitando 2022). Fears of stalled internal body organs after 1 year and infertility are some of the fears that the majority of the youth in the country have cited. Most of the populace also ignored the responsible wearing of face masks, some doing it to get away from authorities, but not for their protection or that of others. These, among other perceptions, allude to failed trust on the part of the government and its stakeholders, who are tasked with the responsibility of protecting her people. This attests to the fact that in as much as COVID-19 has a biological component to wrestle with, there are social, psychological, environmental and political dimensions that need to be factored in going forward. The Kenyan government would need to put more effort into gaining public trust and confidence that was eroded in the face of the pandemic. Many people still struggle to sustain their families, as some have indefinitely lost their jobs. Inequalities in cushioning people from the effects of the pandemic are also a major challenge that the government in Kenya grapples with. Social exclusion of the visually challenged, people living with disabilities and the mentally and psychologically disturbed from the effects of hurried burials of loved ones is a shadow pandemic that calls for attention. In concurrence with Aliyu (2020), it is the responsibility of governments to ensure public trust through transparent and timely communication and dialogue on all decisions taken.

Conformity to preventive measures against COVID-19 largely depended on how public health ethics principles were adhered to by the government stakeholders to prompt public conformity. We have argued that partial ethical decision-making prevailed in the public eye, even though the government and ministry of health may have arrived at the decisions impartially. Failure to avert political campaigns during the pandemic, failure to name the culprits of the COVID-19 millionaires' saga, and the failure to serve justice to those whose lives succumbed in the hands of policemen, compromise the government's integrity and it wanes people's trust in the government's ability to manage infectious pandemics, now and in the future. Trust and integrity on the part of the government are core values for public health ethics. Social justice and solidarity are more pertinent values that the public desire than the common good cliché that is barely visible in the community. It is well established that people naturally mimic perceived normative behaviour from those in authority (Norton et al. 2021). The WHO (2020) insisted on subjective control measures such as hand washing, wearing masks and self-quarantine, among others. However, people will only adhere to guidelines if they do not feel socially excluded and the severity of the pandemic as they perceive it from their peers and those in authority. The correlation of duties and rights in ethical decision-making processes is a component worth pursuing, especially in the field of public health ethics. Reliance on subjective preventive measures though promising is bound to fail if one's life situation and circumstances do not convince them of their

worth. The government and its stakeholders, thus, ought to understand the major role of influence they play unknowingly.

In the following section, I reason out the implication of mimicked ethical behaviour in public health ethics to environmental ethics and conservation.

Public health ethics informs environmental ethics

Public health ethics:

> [*H*]as moved from its traditional concern with the tension between individual autonomy and community health to a wider focus on social justice and solidarity that includes individual, community, and environmental health. (Lee 2017:4)

In resonance with Lee (2017), public health ethics attends to:

> [*B*]road commitments reflected in the increasing concern with the connectedness of health of individuals to the health of populations, to the health of animals, to the health of the environment; it is well situated to reconnect all three 'fields' of ethics to promote a healthier planet. (p. 5)

Promising as it may sound, overall generalisations and heaping of responsibility on Mother Earth to public health ethics is like throwing the weight onto the government and her stakeholders. Such understanding relieves the populace of the caregiving role to Mother Earth and all that she sustains, which is dangerous. Capitalistic relations emanating from the concept of dominion and lordship over Mother Earth have led to overconsumption and manipulation of natural resources. As such, an unlearning of misleading and unconservative ethical frameworks is called for if our home will continue to welcome all to plenty.

Cognisant of these generalisations, Chemhuru (2019) invested in an understanding of African environmental ethics where specific concerns such as the moral status of nature, ubuntu and the environment, and African relationalism, among others, are discussed. He confers living and non-living beings with a moral status to facilitate conservation. Laudable as it may sound, the regeneration of the environment and all in it cannot philosophically be solely duty bound. It is rather a natural process that takes place when all conditions are conducive and remain uninterrupted by those who have the rationality and power to interrupt, in this case, humanity. To counter the moral status of nature, Metz (2019) introduces modal-relationalism, arguing that something has moral status insofar as it is capable of having a certain causal or intentional connection with another being. It is unclear how non-living organisms may have a causal or intentional connection with human beings. Their being and thriving are necessitated by a power, which one may accord to the supernatural and/or to science, but on and by themselves, moral power is unintelligible on their end. Other scholars of African environmental ethics have defended ubuntu environmental ethics (Ogungbemi 1997; Oruka 1993; Ramose 1999) as an indigenous, attractive and relevant conception for sustainability. However, Gwaravanda (2019) challenges generalisations of ubuntu as the concept may be conceived differently in different contexts. Among these insightful advances, the Circle of Concerned African Women Theologians, commemorating 30 years in existence, held a conference in Gaborone, Botswana, in 2019, where the theme symbolised the earth to a mother who births, cares for and nurtures a baby to maturity. The challenges that mothers and women go through are likened to the challenges the earth has gone through under our watch.

Systemic and structural challenges of gender inequality advanced by androcentric tendencies have trampled on women's progress and expression. Likewise, these structural challenges heightened in the face of COVID-19 to endanger people's lives and that of the environment. As we learn how to live in the 'new normal' prompted by COVID-19, safe disposal of face masks has eluded not only the citizens themselves but also the government. Face masks of various colours, sky blue, pink, white and black, paint our environment. It is not uncommon to trace a bird entangled by the elastic holding string of a poorly disposed-off face mask. Young children within estates and informal settlements are collecting and playing with used masks that are a major threat to their health. Public health ethics does not just hold at issuing preventive precautions but ought to follow up with the community even on the right strategies of disposing of face masks and sanitiser containers to avert the outbreak of another disease. Unfortunately, the government and the entire populace have failed to concentrate on the detail of disposing of used masks, as they dealt with the rapid disposal of dead bodies. Leopold (1989:224–225) advanced a land ethic that holds that 'a thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise'. Poor disposal of used face masks, surgical gloves, soap and sanitiser bottles points to a wanting environmental ethic. Poverty is a structural injustice and irresponsibility on both ends of the citizen and the government worked together in the era of COVID-19 to highlight the need for all-round environmental health ethics (Resnik 2019).

The management of COVID-19 is primarily of supportive care for both humanity and the environment. However, the consciousness of the value of the common good and social justice was marred by disobedience and excessive use of power by the authorities. As argued earlier, the responsibility and integrity on the part of the government and its stakeholders were perceived by the populace to be wanting. As such, collective moral responsibility comes in handy in community-oriented public health ethics. The environment that sustains humanity is then caught up in the quagmire of the pandemic and advances to prevent its further spread. The author urges in this article that public health ethics has a direct connection to environmental ethics owing to the zoonotic trait of COVID-19, and because we are an ecosystem whose biodiversity is interdependent.

Environmental conservation efforts and gender inequality stood out during the COVID-19 pandemic. Most frontline

healthcare workers were globally reported to be women, a case that is not any different in Kenya (Boniol et al. 2019; Crimi & Carlucci 2021; Organization for Economic Cooperation and Development [OECD] 2020). The caring role for COVID-19 patients' self-quarantining at home was a woman's job, both young and old. These caring roles put women at risk of contracting the virus more than men who took a distant role, though present. In agreement with Manyonganise (2022), COVID-19, like the other passed zoonotic pandemics, wore a woman's face. Although it is difficult to say what could change the present dynamics of gender inequality, gender roles and their reproduction in society, the caring and collaborative dimensions of experience would have to become more appealing to people and more highly valued. The caring and nurturing roles called upon by the environment are naturally not expected from men but from women. The cliché that women connect more to nature than men is a fallacy that men ought to deconstruct. The sort of equality called for here is not to be understood as sameness, but as equality in the basic conditions for differentiated individuals, for a common home that we all inhabit. As we stayed together, we all realised how the earth was strained to provide even vegetables for two meals a day. Air pollution loomed the atmosphere as more trees were being shelved to provide firewood and charcoal that would sustain the constant stay at home. Washing hands with running water and soap challenged women further in informal settlements. Availability or the lack of running water, and open sewerage drainages prompted the outbreak of water-borne diseases, loading more unpaid caring jobs on women. With this growing recognition of interdependence between humanity and the environment and a realisation of the benefits of cooperation, the author hopes that people would come to appreciate how inter-relational freedom, love and care would enhance their wellbeing.

Mental instability is another structural injustice that COVID-19 brought to the fore. Management of the infectious nature of COVID-19 affected the psychological stability of many people in Kenya. For instance, in the early days of the pandemic, the government of Kenya issued a guideline that all bodies infected with the virus were to be disposed of within 48–72 h. The burial of the remains was to be carried out by the health officers who had to be in special attire in the absence or minimal representation of family members. Most Kenyans have elaborate burial rites, which were temporarily disregarded. Wives, husbands and children had their spouses or parents buried in their absence. The lack of closure has led to traumatic episodes in some families. Further tracking of COVID-19 patients and quarantine mandates brought about stigma and discrimination, which proved difficult to handle mentally. Suicide cases surged during the pandemic, which attested to the rising mental instability. It is not uncommon to meet wondering persons leading deplorable lives, collecting garbage or living by dumpsites threatening their lives even further. Confinement in houses, with minimal and unequal access to green spaces such as parks, aggravated the situation further. According to Okech and Nyadera (2021:4), 'urban green space helps in maintaining mental and physical health through regular exercise and provides space for social interaction'. They further argue that 'environment influence brain restoration to brain patients by boosting and rejuvenating them hence hastening recuperation' (Okech & Nyadera 2021:5). With little or no access at all to the few green spaces, and the glaring desertification in Kenya, inter-relational concern for humanity and the environment is crucial.

The COVID-19 pandemic illuminated inequalities in Kenya's Internet access and digital technologies. Even though this might be seen to be as a result of poverty, the digital gap systematically and structurally persists across class, gender, age, location and other oppressive divides. In Kenya, most men have access to the Internet and pride themselves as owners of smartphones. Women own smartphones too, but their percentage is insignificant (GSMA 2020). Tracking of COVID-19 patients and communication on the virus' management was publicly shared through mobile phones and social media, to be precise. The unavailability of the Internet, power and few smartphones exposed these inequalities, thus amplifying the digital divide threat on people's basic livelihoods. The ethical concerns on people's autonomy and privacy, as well as confidentiality, while appreciated, are principles that were trampled upon for the sake of social justice and the common good in the face of a contagious pandemic. The importance of smartphones cannot go unrecognised, though the flooding of cheap phone models to saturate society with communication gadgets that have a short-term span pose a threat to the environment (Otieno, Omwenga & Waema 2016). In addition, the country's unavailability of electronic recycling plants is a threat to the ecosystem.

Politics alludes to the art of governance and leadership mandate bestowed on an elected few to govern a nation. In this case, the role of politics extends to nurturing its people for a public role that contributes to peace, moral integrity, stability and sustainability of its nation. The role alludes to an ongoing process that every leader ought to inculcate in his citizens, who look up to the leaders for guidance. The three arms of government in Kenya, namely the executive, legislature and judiciary, all partner in this role, as they ensure law reviews, compliance and implementation of the same, towards sustainability. As such, politics becomes a structure that runs through within each particular country in ways that, if not morally sanctified, the moral inculcation soaked by its citizens becomes flawed. In the Kenyan context, COVID-19 was being managed within an electioneering period. Campaigns for incoming leaders meant that people had to gather in support of their preferred candidates. This was done without stern adherence to COVID-19 protocols, a fact that jeopardised the health of the locals. Inequalities stood out, as the well-to-do politicians safely campaigned from their high cars, while the locals scrambled for space, crowding in to listen to their politicians. On 11 March 2022, the minister of health in Kenya noted that wearing face masks was no longer mandatory in public spaces. He called upon

individuals to take responsibility for their own health as we learn to live with the disease. Even though a majority of the populace stopped wearing masks, a sizeable number still embraced them, especially in public places. The pandemic continued to take away lives, even as politicians continue their campaigns, a fact that raises a lot of suspicions.

Moral motivation by the government goes a long way in nurturing public participation in issues that affect humanity. A case in point is Kenya's ban on non-biodegradable article bags in 2017. The Ministry of Environment banned the use of plastic bags and announced hefty penalties for non-compliance (Kiprop 2017). The governmental embrace of efforts to conserve the environment was highly appreciated, with the executive director of Greenpeace Africa lauding the decision as:

> ... a beacon of hope in fostering an environmentally conscious society and a clear message that Kenya is ready to join other African countries in taking bold steps on environmental issues that are key to ensuring a sustainable future. (Kiprop 2017:1)

The ban on plastic use was a major milestone in ensuring environmental health for the populace, animals and the whole ecosystem. The government's seriousness and cooperation have led citizens to embrace strategies that conserve the environment. However, if the government's role is ignored or is suspicious, the population follows suit. Therefore, the government must break such systemic biases even in its daily management of the entirety of the ecosystem. Politics should transcend the management of citizens and their wellbeing to embrace the totality of the entire ecosystem.

Environmental health ethics delve into inter-relational approaches and concerns present within the ecosystem. It reflects on the conflicts between protecting the environment and promoting human health, with an argument that one takes precedence over the other. The COVID-19 pandemic has unearthed and premised this inter-relational concern, with the claim that the health of animals is the health of individuals and the environment. The opposite is also true! It is imperative now that humanity, as the only rational creation, understands that the time for acting passively to the wellbeing of the ecosystem has lapsed. Issues concerning society concern everyone and everything (plants and animals of all categories). Thus, ecosystem welfare should be everybody's business, regardless of all structural inequalities perpetrated through race, gender and class, among others. The COVID-19 pandemic became a catalyst to understanding such and an equaliser among the ecosystems. The ecosystem community thus serves a pedagogical role in cultivating a kind of a moral perception that enables us to make the shift in our view of the earth and animals from 'a commodity belonging to us' and shift our thought frame and action towards an understanding of 'a community to which we belong' (Leopold 1989:viii). Deliberate action on the part of the government to stem these systemic inequalities is a process that is promising in the future.

Conclusion

The COVID-19 pandemic adversely disrupted the lives of people. Systemic and structural inequalities took root because of interactions between religious, political, economic, socio-cultural and environmental factors, resulting in adverse outcomes. These interactions affected not only the psychological, physical, emotional and social wellbeing of all humanity, but also their ethical way of thinking. Content analysis was employed to thread out systematic structural injustices unmasked by the pandemic, debunk the ethical difficulties in adhering to the pandemic's preventive protocols, and reflect on their implication to environmental ethics. Gender inequalities, poverty, mental instability, the Internet, the digital technologies divide, and politics are some of the structural inequalities that COVID-19 unmasked. These systemic inequalities impacted either positively or negatively on adherence or non-adherence to public health directives on COVID-19 management. As such, the effects of the moral choices embraced within these life situations and circumstances directly impacted the environment, thus highlighting the interconnectedness and inter-relational web existing between humans, living, non-living organisms and the earth. The government is thus premised on the role of nurturing the public to ethical obligation of care through enhancing moral motivation. Compliance with sustainable behaviours, especially from the government bodies and their members, and stringent implementation measures are strategies among the major strategies for saving our motherland from encroachment from all that inhabit her.

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